

CONTENTS OF VOLUME 48

- Aalders, L. E. See Hall, I. V., 321.
- Adedipe, N. O., Ormrod, D. P. and Maurer, A. R. Response of pea plants to soil and foliar application of Cycocel (2-chloroethyl trimethylammonium chloride), 323.
- Alex, J. F. Competition between linseed flax and *Saponaria vaccaria*, 139.
- Anderson, C. H. A comparison of annual crops for seed and residue in the semi-arid region of western Canada, 287.
- Anderson, C. H. and Kusch, A. G. Response of rapeseed to applied nitrogen, phosphorus, potassium and sulfur when grown above 57 degrees North latitude, 611.
- Anderson, G. W. See Stoskopf, N. C., 428, and Winch, J. E., 393.
- Ashby, D. L. and Looney, N. E. Mineral content of fruit and leaves of Spartan apple trees treated with succinic acid 2,2-dimethyl hydrazide, 422.
- Ashford, R. See Lawrence, T., 85.
- Atkinson, T. G. See McKenzie, Hugh, 479.
- Austenson, H. M. Coumaphos as a bird-repellent in grain plots, 349.
- Bailey, Catherine H. See Layne, R. E. C., 231.
- Baker, R. J. Genotype-environment interaction variances in cereal yields in western Canada, 293.
- Beacom, S. E. See Cooke, D. A., 167.
- Beaton, J. D., Speer, R. C. and Harapiak, J. T. Response of red clover to Kimberley electric furnace iron slag and other liming materials, 455.
- Belndelow, V. M. See Reinbergs, E., 31.
- Bergen, H. J. See Peterson, L. K., 109.
- Bezeau, L. M. See Johnston, A., 351.
- Bloomberg, W. J. A technique for recovering seeds from forest nursery beds, 340.
- Bolton, A. T. and Nuttall, V. W. Pathogenicity studies with *Fusarium poae*, 161.
- Bonin, S. G. and Tomlin, D. C. Effects of nitrogen on herbage yields of timothy harvested at various developmental stages, 501.
- Effects of nitrogen on herbage yields of reed canarygrass harvested at various developmental stages, 511.
- Bowden, D. M., Taylor, D. K. and Davis, W. E. P. Water-soluble carbohydrates in orchard-grass and mixed forages, 9.
- Bradner, N. R. See Tyson, H., 405.
- Bradner, N. R. and Brink, V. C. A new flavonoid in alfalfa, 97.
- Bradner, N. R. and Childers, W. R. Cytoplasmic male sterility in alfalfa, 111.
- Briggs, K. G. and Shebeski, L. H. Implications concerning the frequency of control plots in wheat breeding nurseries, 149.
- Brink, V. C. See Bradner, N. R., 97.
- Bruehl, G. W. and Lai, P. Influence of soil pH and humidity on survival of *Cephalosporium gramineum* in infested wheat straw, 245.
- Byers, D. L. See MacLean, K. S., 155.
- Calder, F. W. See Langille, J. E., 626.
- Calder, F. W. and MacLeod, L. B. *In vitro* digestibility of forage species as affected by fertilizer application, stage of development and harvest dates, 17.
- Campbell, C. A. Influence of soil moisture stress applied at various stages of growth on the yield components of Chinook wheat, 313.
- Campbell, C. A. and Read, D. W. L. Influence of air temperature, light intensity and soil moisture on the growth, yield and some growth analysis characteristics of Chinook wheat grown in the growth chamber, 299.
- Carson, R. B. See Lessard, J. R., 581.
- Chevrette, J.-E. See Girard, J.-Marc, 102.
- Chiang, Lin-Ying and Robertson, J. A. Growth and yield of progeny of nitrogen and phosphorus fertilized barley plants, 57.
- Childers, W. R. See Bradner, N. R., 111.
- Christie, B. R. and Mowat, D. N. Variability of *in vitro* digestibility among clones of brome-grass and orchardgrass, 67.
- Chubey, B. B. and Walkof, C. A rapid, non-destructive method for estimating chipping quality of potatoes, 636.
- Clark, K. W. See Dedio, W., 175.
- Cooke, D. A., Beacom, S. E. and Dawley, W. K. Response of six-year-old grass-alfalfa pastures to nitrogen fertilizers in northeastern Saskatchewan, 167.
- Crossley, J. H. Warm vs. cool short days as preconditions for flowering of *Pelargonium domesticum* cultivars, 211.
- Cumming, W. A. See Molnar, J. M., 595.
- Cutcliffe, J. A., Munro, D. C. and MacKay, D. C. Effect of nitrogen, phosphorus, potassium and manure on terminal, lateral, and total yields and maturity of broccoli, 439.

- Dass, H. C. and Weaver, G. M. Modification of ozone damage to *Phaseolus vulgaris* by antioxidants, thiols and sulfhydryl reagents, 569.
- Daubeny, Hugh A. Cheam strawberry; 629.
See also Eaton, G. W., 342.
- Davis, W. E. P. See Bowden, D. M., 9.
- Dawley, W. K. See Cooke, D. A., 167.
- Dedio, W. and Clark, K. W. Biochanin A and formononetin content in red clover varieties at several maturity stages, 175.
- De Jong, E. See Yang, S. J., 89.
- Dekker, A. J. See Evans, E. J., 183.
- Denby, L. G. A comparator for color grading of processing tomatoes, 633.
- Dermine, P. See Lessard, J. R., 581.
- Dhanvantari, B. N. Effects of selected fungicides on germination of conidia of *Cytospora cincta* and *C. leucostoma* in vitro, 401.
- Dotzenko, A. D. See Townsend, C. E., 273.
- Downey, R. K. See Kondra, Z. P., 108.
- Dryden, R. D. See Friesen, H. A., 213.
- Eaton, G. W., Daubeny, Hugh A. and Norman, Rossalynn C. Pollination techniques for red raspberry breeding programs, 342.
- Eaton, G. W. and Ormrod, D. P. Photoperiod effect on plant growth in cranberry, 447.
- Eaves, C. A. See Lockhart, C. L., 557.
- Edgington, L. V. See Reinbergs, E., 31.
- Edlin, F. E. See Townsend, C. E., 273.
- Elliot, C. R. Aurora alsike clover, 105.
Boreal creeping red fescue, 106.
- Emmond, G. S. See Hergert, G. B., 630.
- Estey, R. H. A. A transparent root-observation cell, 547.
- Evans, E. J. and Dekker, A. J. Comparative Cs-137 content of agricultural crops grown in a contaminated soil, 183.
- Faris, D. G. See Ormrod, D. P., 363.
- Ferguson, W. S. See Mack, A. R., 535.
- Finlayson, D. G. See Freeman, Jack A., 415.
- Fleischmann, G. See Martens, J. W., 425.
- Fleischmann, G., Martens, J. W. and McKenzie, R. I. H. Parathion, a selective rust fungicide, compared with maneb in the control of cereal rusts, 261.
- Fletcher, H. F. See Maurer, A. R., 129.
- Foott, W. H. and Timmins, P. R. Incidence of injury to corn by *Rhopalosiphum padi*, 545.
- Forsyth, F. R. See Lockhart, C. L., 557.
- Franklin, E. W. See Loughheed, E. C., 435.
- Freeman, Jack A. and Finlayson, D. G. Evidence of incompatibility between a herbicide and insecticides in direct-seeded cabbage, 415.
- Freeman, Jack A. and Stace-Smith, R. Effects of tomato ringspot virus on plant and fruit development of raspberries, 25.
- Freyman, S. Spectral distribution of light in forests of the Douglas fir zone of southern British Columbia, 326.
- Friesen, H. A., Vanden Born, W. H., Keys, C. H., Dryden, R. D., Molberg, E. S. and Siemens, B. Effect of time of application and dosage of dicamba on the tolerance of wheat, oats and barley, 213.
- Gates, L. F. See Slykhuys, J. T., 411.
- Gfeller, F. See Tyson, H., 405.
- Girard, J.-Marc et Chevette, J.-E. Interaction variété-régie chez le lotier, 102.
- Gourley, C. O. Fungicidal control of *Botrytis cinerea* on four strawberry varieties, 267.
- Granger, R. L. and Hogue, E. J. Effect of Alar on winterhardiness of raspberries, 100.
- Grant, M. N. See Roberts, D. W. A., 369.
- Grover, R. Response of conifer seedlings and weeds to seedbed fumigants, 189.
- Hall, I. V. and Aalders, L. E. Fruit set and berry development of lowbush blueberry as affected by temperature, 321.
- Hamilton, H. A. See Nuttall, V. W., 409.
- Hammill, M. M. See Johnston, F. B., 473.
- Harapiak, J. T. See Beaton, J. D., 455.
- Harvey, B. L., Reinbergs, E. and Somaroo, B. H. Inheritance of female sterility in barley, 417.
- Heinrichs, D. H. See Lawrence, T., 75.
- Hergert, G. B. See Kemp, J. G., 345.
- Hergert, G. B. and Emmond, G. S. A fertilizer placement seeder for horticultural crops, 630.
- Hidioglou, M. See Lessard, J. R., 581.
- Hogue, E. J. See Granger, R. L., 100.

- Hough, L. F. See Layne, R. E. C., 231.
Hubbard, W. F. See Ormrod, D. P., 363.
Information for authors on publishing in the Canadian Journals of Animal, Plant and Soil Science, 115.
Jackson, H. O. See Weaver, G. M., 37 and 561.
Johnston, A. See Smoliak, S., 119.
Johnston, A., Bezeau, L. M., Smith, A. D. and Lutwick, L. E. Nutritive value and digestibility of fertilized rough fescue, 351.
Johnston, A., Smith, A. D., Lutwick, L. E. and Smoliak, S. Fertilizer response of native and seeded ranges, 467.
Johnston, F. B., Spangelo, L. P., Watkins, R. and Hammill, M. M. Relationships of sugar, acid and phenolic constituents of apple leaves and fruits, 473.
Johnston, W. H. Paragon, a new variety of malting barley, 339.
Jones, G. E. See Stoskopf, N. C., 428, and Winch, J. E., 393.
Kaufmann, M. L. Coleoptile length and emergence in varieties of barley, oats and wheat, 357.
Kemp, G. A. Limelight green-shell bean, 219.
Earligold muskmelon, 220.
Green seed color in the common bean, 228.
Low-temperature growth responses of the tomato, 281.
Six new hardy chrysanthemum cultivars, 433.
Kemp, J. G. and Hergert, G. B. The Ottawa single-row cereal harvester for experimental plots, 345.
Kemp, J. G. and Roach, W. S. Latent evaporation - a measure of hay drying rates, 554.
Keys, C. H. See Friesen, H. A., 213.
Kondra, Z. P. and Downey, R. K. Pollination bags for individual florets of *Brassica*, 108.
Kozlowski, T. T. and Sasaki, S. Effects of direct contact of pine seeds or young seedlings with commercial formulations, active ingredients or inert ingredients of triazine herbicides, 1.
Kusch, A. G. See Anderson, C. H., 611.
Lai, P. See Bruehl, G. W., 245.
Langille, J. E. and Calder, F. W. Seasonal change of protein and *in vitro* digestibility of four timothy varieties grown on dikeland, 626.
Langille, J. E., MacLeod, L. B. and Warren, F. S. Influence of harvesting management on yield, carbohydrate reserves, etiolated regrowth, and potassium uptake of birdsfoot trefoil, 575.
Lawrence, T. and Heinrichs, D. H. Long-term effects of row spacing and fertilizer on the productivity of Russian wild ryegrass, 75.
Lawrence, T. and Pelton, W. L. Mulch effects on mesocotyl development in Russian wild ryegrass, 216.
Lawrence, T., Warder, F. G. and Ashford, R. Nitrate accumulation in intermediate wheat-grass, 85.
Layne, R. E. C., Bailey, Catherine H. and Hough, L. F. Efficacy of transmission of fire blight resistance in *Pyrus*, 231.
Lee, T. T. See Walker, E. K., 381.
Leefe, J. S. Effect of soil pH on the phytotoxicity of simazine to strawberries, 424.
Lees, D. H. See Nuttall, V. W., 409.
LeLacheur, K. E. See MacKay, D. C., 527.
LeLacheur, K. E. and MacKay, D. C. Effect of dolomitic limestone treatments on yield, quality and cation content of flue-cured tobacco, 519.
Lessard, J. R., Hidioglou, M., Carson, R. B. and Dermine, P. Intra-seasonal variations in the selenium content of various forage crops at Kapuskasing, Ontario, 581.
Lockhart, C. L. Influence of various carbon dioxide and oxygen concentrations on the growth of *Fusarium oxysporum* *in vitro*, 451.
Lockhart, C. L., Forsyth, F. R. and Eaves, C. A. Effect of ethylene on development of *Gloeosporium album* in apple and on growth of the fungus in culture, 557.
Longley, R. P. See Webster, D. H., 334.
Looney, N. E. See Ashby, D. L., 422.
Lougheed, E. C. and Franklin, E. W. Automated system for measuring respiration, 435.
Lutwick, L. E. See Johnston, A., 351 and 467.
Lyall, L. H. See Nuttall, V. W., 409.
Mack, A. R. and Ferguson, W. S. A moisture stress index for wheat by means of a modulated soil moisture budget, 535.
MacKay, D. C. See Cutcliffe, J. A., 439, LeLacheur, K. E., 519, and Munro, D. C., 487.
MacKay, D. C. and LeLacheur, K. E. Comparison of cured versus uncured leaf samples for evaluation of inorganic composition of tobacco, 527.
MacLean, K. S. and Byers, D. L. Nutrient content of field-grown peas, 155.
MacLeod, L. B. See Calder, F. W., 17, and Langille, J. E., 575.

- Martens, J. W. See Fleischmann, G., 261.
- Martens, J. W., Fleischmann, G., McKenzie, R. I. H. and Piening, L. Effect of dithiocarbamate and oxathiin fungicides on the yield of oats in the absence of foliar diseases, 425.
- Mason, E. B. B. and Turley, R. H. Reciprocating irrigator, 550.
- Maurer, A. R. See Adedipe, N. O., 323.
- Maurer, A. R., Ormrod, D. P. and Fletcher, H. F. Response of peas to environment. IV. Effect of five soil water regimes on growth and development of peas, 129.
- McKenzie, Hugh. See Peterson, L. K., 109.
- McKenzie, Hugh and Atkinson, T. G. Inheritance of Thatcher-type resistance to common root rot in spring wheat, 479.
- McKenzie, R. I. H. See Fleischmann, G., 261, and Martens, J. W., 425.
- Meheriuk, M. See Porritt, S. W., 495.
- Meheriuk, Michael and Porritt, S. W. Chlorogenic acid levels of McIntosh apples with sunscald, 621.
- Metcalfe, D. R. See Reinbergs, E., 31.
- Mills, J. T. and Wallace, H. A. H. Determination of selective action of fungicides on the microflora of barley seed, 587.
- Molberg, E. S. See Friesen, H. A., 213.
- Molnar, J. M. and Cumming, W. A. Effect of carbon dioxide on propagation of softwood, conifer and herbaceous cuttings, 595.
- Mortimore, C. G. See Slykhuis, J. T., 411.
- Mowat, D. N. See Christie, B. R., 67.
- Munro, D. C. See Cutcliffe, J. A., 439.
- Munro, D. C. and MacKay, D. C. Effects of sources of phosphorus on yields and phosphorus content of perennial ryegrass and Brussels sprouts grown on Podzol soils in the greenhouse, 487.
- Norman, Rossalynn, C. See Eaton, G. W., 342.
- Nuttall, V. W. See Bolton, A. T., 161.
- Nuttall, V. W., Lyall, L. H., Lees, D. H. and Hamilton, H. A. Response of garden crop plants to low dose gamma irradiation of seeds, 409.
- Ormrod, David J. and Renney, A. J. A survey of weed leaf stomata and trichomes, 197.
- Ormrod, D. P. See Adedipe, N. O., 323, Eaton, G. W., 447, and Maurer, A. R., 129.
- Ormrod, D. P., Hubbard, W. F. and Faris, D. G. Effect of temperature on net carbon dioxide exchange rates of twelve barley varieties, 363.
- Pelton, W. L. See Lawrence, T., 216.
- Peterson, L. K., Bergen, H. J. and McKenzie, Hugh. A mechanical harvester for collecting larvae of the wheat stem sawfly, 109.
- Piening, L. Development of barley net blotch from infested straw and seed, 623.
See also Martens, J. W., 425.
- Pih, Te-sen and Toop, E. W. Effects of gibberellic acid on growth of *Antirrhinum majus* 'Utah White' in a carbon dioxide-enriched environment, 617.
- Porritt, S. W. See Meheriuk, Michael, 621.
- Porritt, S. W. and Meheriuk, M. Application of chemicals for control of apple scald, 495.
- Pringle, W. L. and van Ryswyk, A. L. Carry-over effects of high fertilizer rates on native sedge bog vegetation in interior British Columbia, 49.
- Read, D. W. L. See Campbell, C. A., 299.
- Reinbergs, E. See Harvey, B. L., 417, and Stoskopf, N. C., 428.
- Reinbergs, E., Edington, L. V., Metcalfe, D. R. and Bendelow, V. M. Field control of loose smut in barley with the systemic fungicides Vitavax and Plantvax, 31.
- Renney, A. J. See Ormrod, David J., 197.
- Roach, W. S. See Kemp, J. G., 554.
- Roberts, D. W. A. and Grant, M. N. Changes in cold hardiness accompanying development in winter wheat, 369.
- Robertson, J. A. See Chiang, Lin-Ying, 57.
- St-Pierre, C. A. Une poulie variable pour régler la longueur du semis des parcelles de céréales, 224.
- Sasaki, S. See Kozłowski, T. T., 1.
- Shebeski, L. H. See Briggs, K. G., 149.
- Siemens, B. See Friesen, H. A., 213.
- Simpson, G. M. Association between grain yield per plant and photosynthetic area above the flag-leaf node in wheat, 253.
- Slykhuis, J. T., Mortimore, C. G. and Gates, L. F. Kernel red streak of corn in Ontario and confirmation of *Aceria tulipae* (K.) as the causal agent, 411.
- Smith, A. D. See Johnston, A., 351 and 467.
- Smith, J. Drew. Control of *Pyrenophora bromi* in *Bromus inermis* by burning crop residues, 329.
- Smith, Roger A. A new type of soil jar lid for use in mycological tests, 222.
- Smoliak, S. See Johnston, A., 467.

- Smoliak, S. and Johnston, A.** Germination and early growth of grasses at four root-zone temperatures, 119.
- Somaroo, B. H.** See Harvey, B. L., 417.
- Somers, E.** See Wales, P., 377.
- Spangelo, L. P.** See Johnston, F. B., 473.
- Speer, R. C.** See Beaton, J. D., 455.
- Srivastava, M. P. and Tandon, R. N.** Changes in ascorbic acid content of mosambi fruit induced by *Botryodiplodia theobromae*, 337.
- Stace-Smith, R.** See Freeman, Jack A., 25.
- Storer, K. R.** See Townsend, C. E., 273.
- Stoskopf, N. C., Anderson, G. W., Reinbergs, E. and Jones, G. E.** Increased yields from cereals sown on frozen soil, 428.
- Stroud, F. D.** See Weaver, G. M., 37.
- Suzuki, M.** Evaluation of regrowth potential of perennial forage crops using triphenyltetrazolium chloride, 113.
- Tandon, R. N.** See Srivastava, M. P., 337.
- Taylor, D. K.** Fraser oats, 107.
See also Bowden, D. M., 9.
- Timmins, P. R.** See Foott, W. H., 545.
- Tomlin, D. C.** See Bonin, S. G., 501 and 511.
- Tonks, N. V.** Effectiveness of the systemic insecticide oxydemetonmethyl applied in liquid fertilizer for green peach aphid control on chrysanthemum, 332.
- Toop, E. W.** See Pih, Te-sen, 617.
- Townsend, C. E., Dotsenko, A. D., Storer, K. R. and Edlin, F. E.** Response of zigzag clover genotypes to management practices, 273.
- Turley, R. H.** See Mason, E. B. B., 550.
- Tyson, H., Bradner, N. R. and Gfeller, F.** Interaction of variety and environment in field pea trials, 405.
- Vanden Born, W. H.** See Friesen, H. A., 213.
- van Ryswyk, A. L.** See Pringle, W. L., 49.
- Voisey, Peter W.** A temperature-recorder time control, 226.
- Wales, P. and Somers, E.** Susceptibility of aflatoxin-producing strains of *Aspergillus flavus* to a range of fungicides, 377.
- Walker, E. K. and Lee, T. T.** Relationship of phenolic constituents to maturity, stalk position, and certain physical characteristics of flue-cured tobacco, 381.
- Walkof, C.** See Chubey, B. B., 636.
- Wallace, H. A. H.** See Mills, J. T., 587.
- Walton, P. D.** Spring wheat variety trials in the Prairie provinces, 601.
- Warder, F. G.** See Lawrence, T., 85.
- Warren, F. S.** See Langille, J. E., 575.
- Watkins, R.** See Johnston, F. B., 473.
- Weaver, G. M.** Crotch angle development in peach trees as influenced by scion and root-stock cultivars, 419.
See also Dass, H. C., 569.
- Weaver, G. M. and Jackson, H. O.** Relationship between bronzing in white beans and phytotoxic levels of atmospheric ozone in Ontario, 561.
- Weaver, G. M., Jackson, H. O. and Stroud, R. D.** Assessment of winterhardiness in peach cultivars by electric impedance, scion diameter and artificial freezing studies, 37.
- Webster, D. H. and Longley, R. P.** McIntosh apple shape in relation to position in the blossom cluster, 334.
- Winch, J. E., Anderson, G. W. and Jones, G. E.** Use of simazine as a preventative weed control herbicide for birdsfoot trefoil, 393.
- Wood, G. W.** Self-fertility in the lowbush blueberry, 431.
- Yang, S. J. and de Jong, E.** Measurement of internal water stress in wheat plants, 89.